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DEPARTMENT OF STATE

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Memorandum of Conversation

DATE: February 21, 1961

SUBJECT: Briefing for Mr. Acheson on Safety and Stability of Nuclear Weapons

PARTICIPANTS: Mr. Acheson
Mr. Wohlstetter
Mr. Wessner, President's Science Adviser
Mr. Henry Owen, S/P
Dr. Marvin Stern, Assistant Secretary of Defense for Research and Engineering (Strategic Weapons)
Colonel Dodge, Office of Assistant Secretary of Defense for R&E
Mr. Miller, EUR/RA

~~SAC - Mr. Farley~~
EUR - Mr. Kohler
✓ RA - "Fessenden"

Any R.D. info in
this? Let's restrict
distribution to FDIK for
2/28 + Farley for moment.

Dr. Stern began by saying that he had been studying safety and stability of strategic nuclear delivery systems in the U.S. The problems he encountered were serious but they would be even more so in the case of nuclear weapons deployed for the support of NATO.

Top level command and control systems can be eliminated relatively easily by an enemy. Only a few weapons would be required to take out the top echelon in Washington, Omaha and Norfolk, and thus theoretically to prevent the "Go" signal ever being given to US strategic forces. Yet he has found that the military are not worried about the possibility of military inaction. They reason that aircraft commanders will know what to do as loyal Americans. They will know that a war is on and will proceed to attack. (Mr. Wessner interjected that this discovery of potential elimination of top command is made annually and that the usual remedy is to advocate several million dollars worth of computers, etc. If General Powers speaks perfectly frankly, he will say that it is most unlikely that we will be caught completely flat-footed. Our Intelligence would have alerted us to the

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AC 367/2

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-2-

possibility of attack and he would say [REDACTED]

There are two practical disadvantages to the foregoing pragmatic concept according to Dr. Stern. First, the haphazard military response based on uncoordinated action of lower echelon commanders is not likely to be effective since many targets will be missed. Secondly, there is a danger that a nuclear accident might be misinterpreted by an aircraft commander as a sign that the US has been attacked. Lincoln Air Force Base, for example, is only 40 miles from Omaha. If there were a nuclear accident at the airfield adjacent to SAC Headquarters, an aircraft commander on alert status at Lincoln AFB might so misinterpret a mushroom cloud visible from his base.

Dr. Stern found in the course of a recent six months study that there is a serious danger of nuclear accident. He cited the following examples:

- a. On January 24, 1961 a B-52 flying over Goldsborough, North Carolina, lost a wing. This aircraft was carrying [REDACTED] weapons, each ^{with} ~~had~~ safety devices. As one of the weapons ^{FELL} out of the aircraft, lanyards tripped on [REDACTED] safety devices which then moved into an armed position.
- b. On inspection of [REDACTED] weapons in a storage depot, Dr. Stern himself found one with at least one of the safety devices in the armed position.
- c. There is a Nike-Hercules Battery [REDACTED] with 50% nuclear warheads and 50% HE warheads. There was an inadvertent launching of one of the missiles which fortunately was armed with a HE warhead.
- d. A Matador [REDACTED] was inadvertently launched and all the safety devices moved into the armed position. Fortunately it only had a training warhead.
- e. The warhead detonated off one of the Jupiter missiles ^{although there was no nuclear explosion.} [REDACTED]

In addition to such mechanical failures, he also mentioned human failures

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ACD 367/3

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-3-

attributable to what he described as idiots and super patriots. He cited the example in Seneca, New York where a service man at a depot screwed together two [redacted] of a warhead thus closing all of the circuits. It would have exploded immediately if it had had a [redacted] in it. ^{Dr. Stern} ~~Mr. Weisner~~ ^{Observation} concluded this brief summary of the possibility of accidents with the fact that the situation is at least as bad in the NATO area.

There is one fairly elementary measure that has been taken in the U.S. to increase safety and stability which could be applied in the NATO area as well. As a part of the "Go" signal, [redacted] is transmitted to airborne bombers which can be applied [redacted] on the weapon. Unless this [redacted] the weapon (presumably newer types with such an adaptation) will not function. Furthermore, provisions have been made for alternative command posts. Thus a 2 or 3 star General is continually airborne over Omaha. Similar arrangements have been made for ^{Cruiser} the communications commander Northampton which will be at sea until relieved.

Mr. Weisner then cited a number of specific problems in the NATO area involving the additional factor of US custody.

a. [redacted] F-84Fs are on continual ground alert which means take off within five minutes. We are violating the law by keeping the [redacted] of the weapons which are hung on these two alert aircraft. The US maintains custody by having one US officer adjacent to a telephone, in the pilot's ready room. There is a fence around the 2 aircraft and 4 [redacted] guards outside the fence. Within the fence is one US service man maintaining custody of the two weapons. It is clear that if [redacted] were so minded they could take off with these weapons on board the two aircraft.

b. [redacted]

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ACD 367/4

-4-

b. [REDACTED] Mr. Weisner pointed out that in addition to other problems [REDACTED] there is a four-hour communication delay.

c. [REDACTED] We have programmed F-100s for [REDACTED] They have or will receive Nike-Hercules which will be in an alert posture (fully armed at all times). These weapons also have a ground to ground capability. (My recollection from a talk at SETAF is that the range is 120 miles -- JYM)

Dr. Stern said that an awareness of the problem of command and control ~~in~~ in the US had led to the interlock-permissive link, device and arrangements for "raising the threshold of command". In the case of SAC and CINCLANT which have been described above. These same principles could be applied in NATO Europe. Dr. Weisner said that the existence of [REDACTED] tactical nuclear weapons deployed in Europe constitute a highly unstable situation because of some of the reasons cited above. Their presence had a deterrent effect to be sure, since both sides ^{are} ~~were~~ using extreme caution, but the situation is a little like putting a stick of dynamite in one's house in order to be conscious of the danger of fire.

Mr. Wohlstetter said existing control procedures should be changed and one way of increasing control would be to have the host countries also possess a "Go" code so that ^{two} ~~it~~ would be necessary to authorize delivery.

Dr. Stern mentioned the incident of the Congressman finding the US "key" hanging on the wall of a control room to illustrate the fallibility of the "two key" theory.

Dr. Weisner said that in conclusion it was clear that the US military have been ^{illegally} ~~illegally~~ operating ~~illegally~~. President Eisenhower allowed dispersal to pass out of civilian hands and into the hands of the military. Thus Mr. Holifield is partly right in his concern and should not be regarded entirely as an obstructor. The Administration is in for a bad time from the JCAE. The President should be concerned with this

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ACD 367/5

-5-

problem and no doubt will be. Mr. Weisner added incidentally that we seem to be following legal procedures in the case of Honest Johns ~~xx~~ in Turkey and the UK ~~Thers~~.

Mr. Acheson asked what Nationality an airborne general in NATO should be referring to the example of the SAC officer. The consensus was that it would not make any difference since physical control measures such as the ~~on~~ the warhead could be devised to require inputs from several sources if desired. Mr. Acheson indicated that he was interested in further information on command and control. Dr. Stern said that up to this time he had been talking mostly of accidents. Mr. Weisner said in conclusion that his own opinion was that the use of tactical nuclear weapons in Europe was not feasible since it was bound to lead to escalation. Mr. Acheson had to leave for the White House at this point.

Mr. Owen asked a few more questions and was ~~told~~ told that it would be perfectly feasible to arrange physical control of weapons which would require "Go" signals from SACEUR, the UK ^{Wohlstetter} and the host country and Mr. Weisner said that possibly after countries had reflected more they would require some control of this kind.

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